

**Responses from CBP Partners: Rich Batiuk, Mark Bryer, Peter Claggett, and Ann Swanson
(embedded below in the original memorandum in bold typeface)**

Memorandum

To: CBP, CBC, TNC

From: CBF

Subject: 2025 Land Use for Phase 3 WIPs – An Alternative

Date: February 16, 2016

Since our meeting on January 12th, we have continued to have internal dialogue about the question of using 2025 land use to develop Phase 3 WIPs, including consideration of Peter Claggett's development scenarios (Thanks Peter!). To refresh your memory, our concerns with the proposed approach were both legal and programmatic. The preliminary opinion of our litigation department is that application of a 2025 Land Use scenario Use would not *preclude* a legal challenge under the NPDES regulations applying to new or additional loads (40 C.F.R. section 122.4 (i)), but will make a "new loads" case more challenging. We are waiting for the discussion of this issue among our attorneys and EPA's before reaching a final conclusion.

Ex. 5 Attorney Client (AC)

On the programmatic/policy side for reasons highlighted below, CBF still does not support the idea of developing input decks for the Phase III WIPs based on 2025 land use. We have some recommendations for an alternative approach which still utilizes 2025 predicted land use that we believe will improve the chances that new loads will be offset and provide other options for incentivizing forest conservation.

We look forward to continuing our discussions with you.

Comments on example development scenarios:

These were quite useful for demonstration purposes. We also believe they illustrate the potential unintended consequence of incentivizing conversion of farmland to developed land to "reduce" loads.

RESPONSE: As we discussed when we met back in January, we can find examples where the conversion of farmland to developed lands lead to a cumulative increase in nutrient and sediment loads as well as a cumulative decrease in loads. Choices to convert farmland to developed lands are going to be made based on an array of reasons.

We would be hard pressed to find a land owner who chose to develop a farm because he/she would reduce his/her pollution load and, therefore, their contribution to the attainment of the Bay TMDL. Ultimately, the state is held accountable for the loads, not the individual landowner. Even with county level target loads in place, the counties would need take into consideration the loads from increased impervious surfaces, contributions to the existing sewer system and that local/regional wastewater treatment facilities, new septic systems/new on-site treatment systems, adjacent roads, commercial areas and parking lots, etc. all associated with increased development.

The potential for this unintended consequence should not be the reason not to work to fully account for the need to offset increases in pollutant loads. We are asking our CBF colleagues to view this challenge from a more realistic perspective and work with us towards institutionalizing a system for offsetting new pollutant loads.

On the technical side, we did want to note some discrepancies in the numbers that were used compared to what MD used during the Accounting for Growth discussions as these will affect the net change calculations. For example, MDE's Accounting for Growth (AFG) calculator gave a loading rate of 4.58 lbs N/yr for developed pervious in Talbot County whereas Peter's estimate is 7.20. Similarly, septic loads were 4.94 in the AFG calculator, but 7.0 in Peter's estimates. Maryland's loading factors include the modeled impacts of the state's requirements for ESD to the MEP and BAT for new septic systems. If Maryland's loading rates are accurate, the discrepancy between agricultural loads and post-development loads shown in Peter's analysis will be even starker.

RESPONSE: In preparing our memo "Change in TN Loads from Land Conversion" we acknowledged lower average loads from development assuming ESD to the MEP. We concur with CBF's statement that assuming ESD to the MEP and BAT, estimated changes in loads due to the conversion of farmland to development would decrease relative to our analysis based on county average land-use loading rates.

In ALL future analyses of projected changes in pollutant loads, we must always be factoring the associated increases that come with development, using summary tables to add the increases in septic system/wastewater treatment facility discharged loads, off-site impervious surfaces, etc. that are triggered in the Partnership's watershed model as agricultural or forest land is converted to developed land.

Armed with the knowledge of expected development patterns, local governments may protect forests, but that could come at the expense of converting farmland, as the pollution loads could be less if this occurs. While it is true that this potential exists even under a 2017 land use, we think explicitly building the Phase 3 WIPs on the future land use will make the farmland tradeoff more explicit and the unintended consequence even more likely to occur.

RESPONSE: There isn't evidence that working with the jurisdictions and their local partners to plan to proactively and publically plan for offsetting new pollutant loads will result in expanded conversion of farmland.

Yes, local jurisdictions could work to game the system now, by changing large areas of land to development just to get the projected credit reductions, but we think this is an unlikely scenario given everything that goes into decisions to develop a plot of land. Just like how the Partnership is working to implement its basinwide BMP verification framework to reduce opportunities for over accounting for implemented practices, we need to put in place a system of accountability for offsetting loads which will make it increasingly difficult to game the system.

Programmatic and policy concerns:

We also believe that including loads from estimated future land use changes in state progress runs sets an expectation that the *public* is responsible for offsetting an increased load, not the party that generated the new load (the developer or new CAFO). As it stands, the Phase II WIPs do not include

state BMP implementation commitments calibrated to offset future loads. As a result, under the Clean Water Act the obligation defaults to the generator of the new load.

RESPONSE: We don't believe that this Clean Water Act obligation is currently being effectively carried out to the point where there are no new pollutant loads to waterbodies designated as impaired. Are there examples where this is occurring, especially where comprehensive accounting for each instance of individual parties responsible for generating new loads are offsetting those new loads? A focus on getting existing offset programs working at this scale is absolutely critical, which includes clearly setting expectations on responsibility for offsets.

We recognize we need to get to the point where EPA is providing even greater oversight of and clearer accountability expectations for the state offset programs. We agree on the need to get to the point where the states are holding generators of new pollutant loads accountable for offsets rather than new loads defaulting to become the state/public's responsibility for offsetting. To get to this objective, we believe we need to start with building this accountability into the Phase III WIPs.

In addition, we believe the two year milestones, from 2018-2019 through 2024-2025 also need to factor in estimated growth in pollutant loads which need to be offset during that two year period, heading towards 2025. So we ask CBF to consider using a combination of getting the Phase III WIPs to account for estimated growth (by sector and geography) through 2025 AND factoring in estimated growth over each 2-year milestone period as part of the pollutant loads each jurisdiction should be planning for.

If CBP progress runs include future loads, the implementation "gap" will increase such that Phase III WIPs will need to contain enhanced levels of BMP implementation sufficient to cover the existing shortfall plus future loads, and the obligation to produce such reductions largely becomes a public sector obligation.

RESPONSE: This concern presumes that offsetting new loads will become strictly a public burden. That's a choice, a default condition due to inaction by the responsible jurisdiction, not a foregone conclusion.

We are working to set up a system so that the responsibility does get assigned to the appropriate jurisdictions, be that a state or a local municipality. It is up to these responsible entities to, in turn, establish and then carry out offset mechanisms which either bring the responsibility for offsetting new load to individual responsible parties or they, the jurisdiction, make the choice to make the obligation a 'public sector obligation.' Again, the state or local government makes that decision/that choice as they have the authority, in many cases, to make the individual parties responsible for generating the new loads to offset those increases, but either choose not to or have no capacity to carry out this work.

We need to put in place a huge incentive for those state and local governments to keep the responsibility with those originally generating the new loads. That's exactly the objective using the 2025 projections to directly inform the development of the Phase III WIPs—getting us seriously starting down that road.

This approach also could have the effect of a delay in offsetting new loads contrary to the Clean Water Act by tacking additional reductions onto a pollution reduction gap that is already very challenging to

close, instead of requiring an offset via the construction general permit or CAFO permit at the time the additional load is created. Bottom line, we believe that use of 2025 land use in this manner has more drawbacks than advantages.

RESPONSE: With all due respect, under the Clean Water Act, at least in the Chesapeake Bay watershed, we have NOT been effective at all in “requiring an offset via the construction general permit or CAFO permit at the time the additional load is created.” In other words, the delay is already happening. We need a focus on clarifying existing requirements for offset programs, including offsetting in a timely manner. The introduction of 2025 land uses is a separate subject and, as we discussed, could be accounted for separately.

Recommendations:

1. CBF agrees that 2025 projections would be very useful information for states and local governments, and could help demonstrate the need for robust offset policies in the state’s WIPs. Consequently, we fully support running those scenarios and sharing the results with the states. Doing so, we believe, will help the states consider the information and plan for the changing land use, without assuming the projections are de facto. We do have some concerns that getting accurate projections for PA will be challenging, but that said, they might still have utility.

RESPONSE: Thank you for that point of agreement. In the case of Pennsylvania, we believe we have enough data from other modeling efforts as well as a solid enough history of land cover and land use changes over the past decades that we can produce projections consistent with the rest of the watershed.

2. In the Phase 2 WIPs, states were required to say, in general, how they would offset new loads.

RESPONSE: And as a result, states only provided the most general descriptions which of limited value when it came to influencing future policy, program and implementation decisions. Even EPA’s more recent attempts to prompt our state partners to quantify their increases in pollutant loads have been largely unsuccessful, often met with the response that ‘we are fully accounting for increases in pollutants through our stormwater permitting programs.’

We believe the 2025 projections should be used to estimate which sectors are expected to experience additional loads and that the Phase 3 WIPs should have a much more detailed section dedicated to describing how these loads, by sector, will be offset. For example, it is clear from the scenarios that adding new septic systems will add new loads of nitrogen. States should have to describe, explicitly and quantitatively, how and when they will offset these new projected septic loads.

RESPONSE: What you are describing above is exactly what your CBP colleagues have been presenting and recommending, only being more specific in terms of not only the sector but also geography. So beyond the concern about the trade-off of farmland, what’s different between your recommendations and what your CBP colleagues have presented to you?

3. To provide accountability that the state is following through on accounting for/offsetting loads, we ask that the CBP provide every two years, at a county scale, not just progress on pollution loads, but also changes in land use (i.e., acres of forest, farm, development lost or gained), animal numbers, septic systems, and air, if possible. Land conversion might also be able to be tracked by construction/building permits e.g., in Maryland local governments must report stormwater BMPs applied to newly developed land to be eligible for credit.

RESPONSE: Tracking changes in impervious cover and resulting conversions of forests and farms to more developed uses is one of the foci of the Land Use Methods and Metrics Outcome described in the 2014 Bay Agreement. We appreciate CBF's participation in our efforts to develop a strategy to address this outcome.

For the Bay TMDL, we are most concerned about persistent changes in land use, land cover, or management that impact the nutrient and sediment loads generated from a parcel of land. While tracking changes in management at the parcel scale remains elusive, tracking changes in land surface characteristics is possible by using aerial and satellite imagery. Our challenge is to distinguish significant persistent change from noise and insignificant ephemeral change (e.g., cars temporarily parked in a field or boats in a marina). For this purpose, Landsat satellite imagery holds great promise due to its temporal and spectral resolution. We as a Partnership are exploring options of working with emerging Landsat products such as USGS' Continuous Change Detection and Classification (CCDC) datasets to monitor land change on an annual basis. However, we expect there will be a minimum 2-year lag time between the dates of imagery acquisition and analysis results. For example, we'll have to wait until 2019 to accurately monitor change over the milestone period 2015-2017 using Landsat imagery. Moreover, our current assessment is that the CBP Partners should strive to classify change from high-resolution imagery every four years. Currently, we're completing a high-resolution (1-meter) classification of land cover in the Bay watershed using 2013/14 imagery. Repeating this assessment using 2017/18 imagery could be accomplished in 2019. In the interim, we will continue to rely on the Chesapeake Bay Land Change Model to infer potential changes in land use/cover at county and modeling segment scales. Remote sensing technology is rapidly changing and so the CBP Partners will reassess the feasibility of more frequent monitoring of land use/cover change every 2 years.

At the same time, we collectively, should consider other ways we might be able to incentivize forest protection. In Maryland, several bills are proposed in the General Assembly that would increase financial incentives: HB 276, which would allow pass-through entities to claim state income tax credits for donated easements, and SB 371, which would provide for a subtraction modification to the state income tax for proceeds from the sale of an easement. CBF is supporting these bills and we are interested in additional ways to increase financial incentives for land conservation. In addition, CBF staff are evaluating regulatory and incentive-based options to meet the state's "no net loss" of forest goal with the intent to advance reforms in an upcoming General Assembly session. We would like to hear more from this group on which reforms could have the most impact.

RESPONSE: We agree on the need for additional mechanisms and legislation to incentivize both farmland and forest conservation. CBC has been working on related legislation in both Maryland and Pennsylvania. However, we still strongly believe if we play out what we have started to outline in terms of the 2025 projections, we better this may be a better way to communication the importance of forests and compel decisions to retain them.

We are also considering policy options in Virginia and Pennsylvania that may help incentivize (especially forest) conservation, but these ideas are not as fully fleshed out.